

Single soldier well-being related to recreational facilities accessible on installation

by

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A REPORT

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Abstract

This report focuses on the impact military installation recreational facilities have on the well-being of single soldiers ('single soldiers' refers to unmarried soldiers). This passion developed partially from being engaged to a military member as well as professional associations with Fort Riley and Little Rock Air Force Base. Because of these connections, surveys and interviews were planned to be conducted with the single soldiers located on these installations. While surveys occurred at both locations, enough surveys to do analysis were gathered only from Fort Riley, and time constraints limited the project to surveys only.

Fort Riley is an Army post located in the Flint Hills Region of Kansas. Fort Riley, also known as "The Big Red One," is home to the 1st Infantry Division and is located on over 100,000 acres with approximately 15,000 active duty members assigned there (U.S. Army Fort Riley, n.d.). Fort Riley's proximity to Kansas State University made it a convenient installation to include in this research project.

The question to be answered in this report is:

How does the built environment of recreational facilities on military installations affect the well-being of single soldiers living on base/post?

All components of the research question were chosen with purpose and intent. The built environment, or "the physical environment constructed by human activity, and involves distribution across space of activities" (Leung et al., 2018, p.1500), is what connects this report to my future career in community planning. A planner can be involved with the built

environment within planning, developing, and reconstruction of buildings if necessary.

Recreational facilities, or what the military often refers to as third space, includes parks, pools, trails, bowling alleys, fitness centers, and much more. This concentration helps to focus the research into a manageable amount of facilities (instead of considering housing, workspace, etc.

Well-being, defined as “a broad category of phenomena that includes people's emotional responses, domain satisfactions, and global judgments of life satisfaction” proposes a connection between people’s surroundings, and their satisfaction with life (Diener, et al. pg. 277, 2000).

Finally, because previous and current research centers mostly on military children and families, this report will focus on single soldiers living in the barracks.. This report will bring to light a different side of the military experience through examining recreational facilities through the single soldier lens, specifically through the surveys taken by soldiers at Fort Riley.

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Chapter 1- Introduction

Military installations¹ are an essential part of military operations of the United States, as well as play a crucial and vital role in their surrounding communities. Employment, population, and median home value in the surrounding community are all highly impacted by an installation (Ryan & Smith, n.d.). Military installations are also interesting and important in terms of the kind of environment they offer for soldiers and others that are working and living on installations. Single soldiers (or unmarried soldiers) specifically, spend a lot of time on the installation as they both, live and work there. Single enlisted soldiers are primarily housed on the installation (called a base in the Air Force and a post in the Army) in barracks or dorms that often mimic college dorms. Well-being and mental and physical health that accompany it, are important for any community, but particularly so for single soldiers that live on installations as most of their time is spent on base, and they are exposed to many stressors while at work. How soldiers spend their free time—however, limited it may be— can contribute to their overall well-being. All communities face challenges, but these challenges are often amplified in military communities because of the added pressures of deployment that can affect mental health, the transitions for reintegration after deployment, as well as effects of increased risks of PTSD and suicide (Gewirtz et al., 2011). When recognizing these concerns, built environment professionals must consider the military members who make up these installations as important factors. Hull et al. (1995) conclude that recreation of just two hours or less can affect the mood of participants.

¹ Military Installation is a term used to represent both military posts (a term primarily used by the Army) as well as bases (a term primarily used by the Air Force) and is where the military conducts training and other military work and also houses many active-duty members.

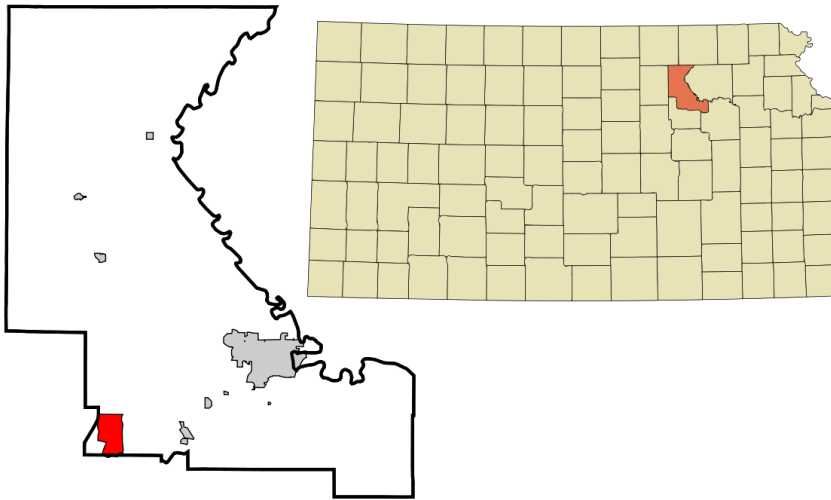
In this report, I focus my analysis on recreational facilities located on military installations, in particular on Fort Riley, Kansas. While there are many recreational facilities located on base both at Fort Riley and off base in Junction City and Manhattan, in general, a majority are geared toward the military families. In a similar vein, existing scholarly literature on well-being, military and soldiers focusses almost entirely on families and children. In this report I focus instead on the single soldiers living on base, and how these facilities affect their perceived well-being. This report is therefore unique in its focus on single soldiers and will give scholars and the military alike, a new perspective on recreational facilities and their role in promoting well-being and a perceived improvement in quality of life for single soldiers. Discovering how to best utilize recreational facilities to benefit service members will improve the well-being for single soldiers and will ultimately support military retention (Installations et al., 1996).

Fort Riley

Fort Riley is located in the Northeast part of Kansas and encompasses over 100,000 acres in total. This is a large installation compared to other army posts. For example, Fort Leonard Wood, located in southern Missouri, is only 61,000 acres. This large amount of acreage allows for more types of trainings and campouts. Fort Riley was chosen as the study area because of its proximity to Kansas State University and the connections and therefore access that I had to the community at Fort Riley based in my interning for Fort Riley in 2019. My ties with the community at Fort

Riley has meant that I was able to distribute surveys to collect data for analysis in this report.

Figure 1: Fort Riley Location



Fort Riley, Kansas Fort Riley North Census-designated place [Map]. (n.d.). In *Fort Riley (CDP), Kansas*. Retrieved April 23, 2021, from [https://en.wikipedia.org/wiki/Fort_Riley_\(CDP\),_Kansas](https://en.wikipedia.org/wiki/Fort_Riley_(CDP),_Kansas)

Fort Riley, home to the 1st Infantry Division, conducts a variety of military training including small-arms and artillery fire, combat vehicle operations, and field maneuvers (Wang et al., 2014). In part, the mission of Fort Riley is stated as:

“...working in close partnership with local, regional and state communities to provide trained and ready forces to meet Joint Force requirements across the full spectrum of current and future operations. Fort Riley manages and maintains unit readiness as directed by the Army Campaign Plan, executes unit re-stationing as directed by FORSCOM, executes garrison operations as directed by Installation Management Command, and conducts homeland defense operations and supports civil authorities.” (Fort Riley in-depth overview. (n.d.).)

There are more than 10,000 soldiers living on Fort Riley. Single soldiers are assigned to barrack housing shown in Figures 2 through 6. This housing is set up like college dorms and include a room for each soldier and shared kitchen and bathroom space. Some of the newer barracks provide private bathrooms for each soldier and a kitchenette shared between just two soldiers (Powers, 2019).

Figure 2: Fort Riley Barracks



Home.army.mil/riley

Figure 3: Fort Riley Barracks 2



Home.army.mil/riley

Figure 4: Fort Riley Barracks 3



Home.army.mil/riley

Figure 5: Fort Riley Barracks Bed



Home.army.mil/riley

Figure 6: Fort Riley Barracks Kitchen



Home.army.mil/riley

Recreational Facilities and Programs aimed at Wellness at Fort Riley

Besides their military duties, Fort Riley has many plans and programs in place regarding recreational facilities and wellness. As an example, a pilot program was started under Healthy Army Communities (HAC) at Fort Riley a few years ago and continues to be a staple in the wellness of the community today. The mission of this program is listed as:

“United States Army Healthy Army Communities (HAC) is the commitment of Army Leaders & installation partners to inspire & promote active solutions to increase Readiness & Resiliency through an Army culture of health for the total Army community of Soldiers, families, retirees & civilians” (Healthy Army Communities (n.d)). To accomplish this mission, HAC focuses on healthier options, active living, and innovative initiatives by working with the Department of Public Works (DPW)². In the 2018 year, the Fit First Initiative began and is where the idea of a trail across the installation began. This trail, going from Wamego to Junction city is a collaborative project between the MWR and DPW. It uses the 10 trails that are already on Fort Riley and the Junction City Riverwalk trail located outside of the post and is a collaboration between Manhattan, Junction City, and Fort Riley³.

In 2020, General Simms expanded Fit First into Victory Wellness⁴

² I worked as an intern with the Department of Public works at Fort Riley in early 2020. During this time, I worked alongside planners and engineers and was able to learn more about the topic of this report and about recreational facilities in Fort Riley through my personal communication with Ken Roynon over the last year

³ Personal communication between Ken Roynon and Claire Mitchell (Author) on March 25, 2021

⁴ Personal communication between Ken Roynon and Claire Mitchell (Author) on March 25, 2021

“Victory Wellness is the 1st Infantry Division’s and Fort Riley’s program to achieve such success and is an effort for every member of our community to increase resilience across the five dimensions of strength: emotional, family, physical, spiritual, and social.” (Victory Wellness Guide, (n.d))

The trail remains a key project of Victory Wellness but faces many unique challenges. Connecting existing trails, creating signage, and ensuring access to the post for community members are among the top logistic challenges. This trail would be more than just a hiking and biking trail but could also hold events such as marathons. Upper command supporting this project helps push it forward⁵. Trails already in use are shown in the following figures.

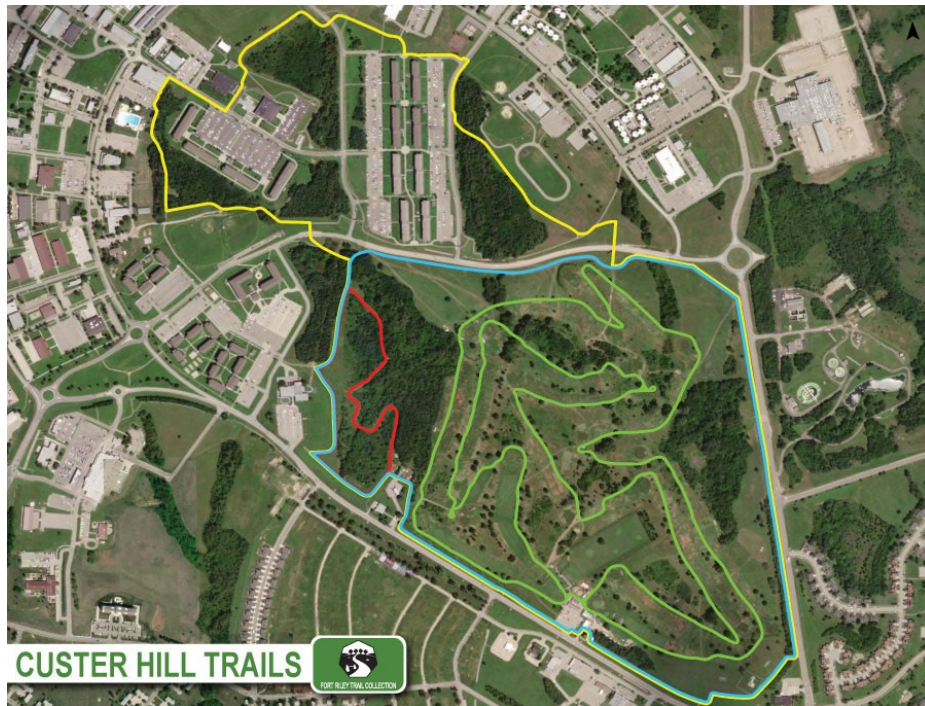
Figure 7: Fort Riley Hiking Trail



Fort Riley Trails. U.S. Army. (n.d.). <https://home.army.mil/riley/index.php/about/things-to-do/post/fort-riley-trails>.

⁵ Personal communication between Ken Roynon and Claire Mitchell (Author) on March 25, 2021

Figure 8: Custer Hill Trails



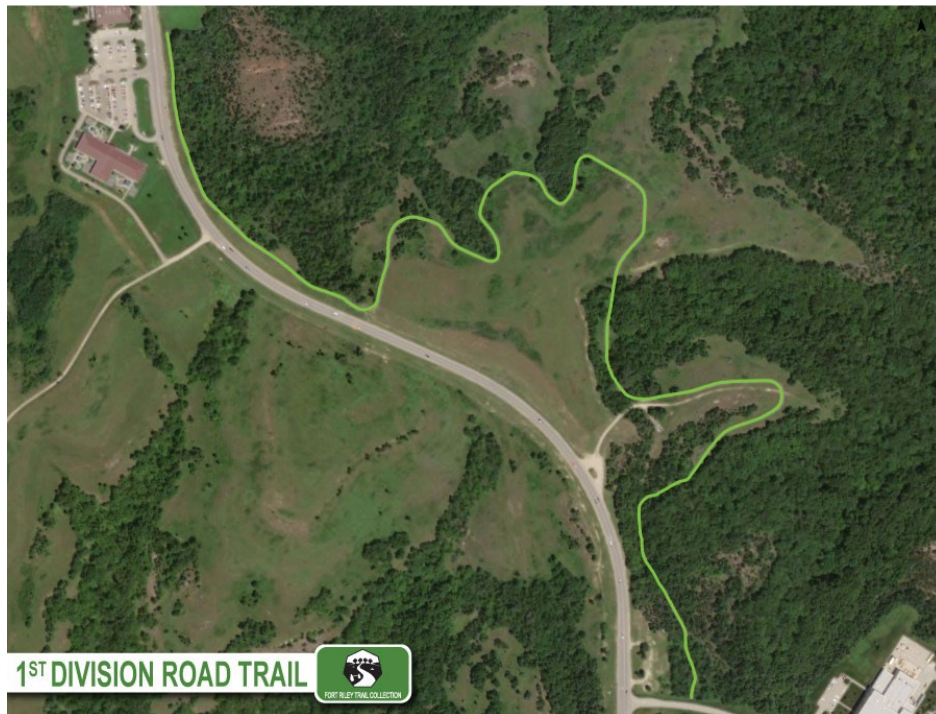
Fort Riley Trails. U.S. Army. (n.d.). <https://home.army.mil/riley/index.php/about/things-to-do/post/fort-riley-trails>.

Figure 9: Riley's Loop Trail



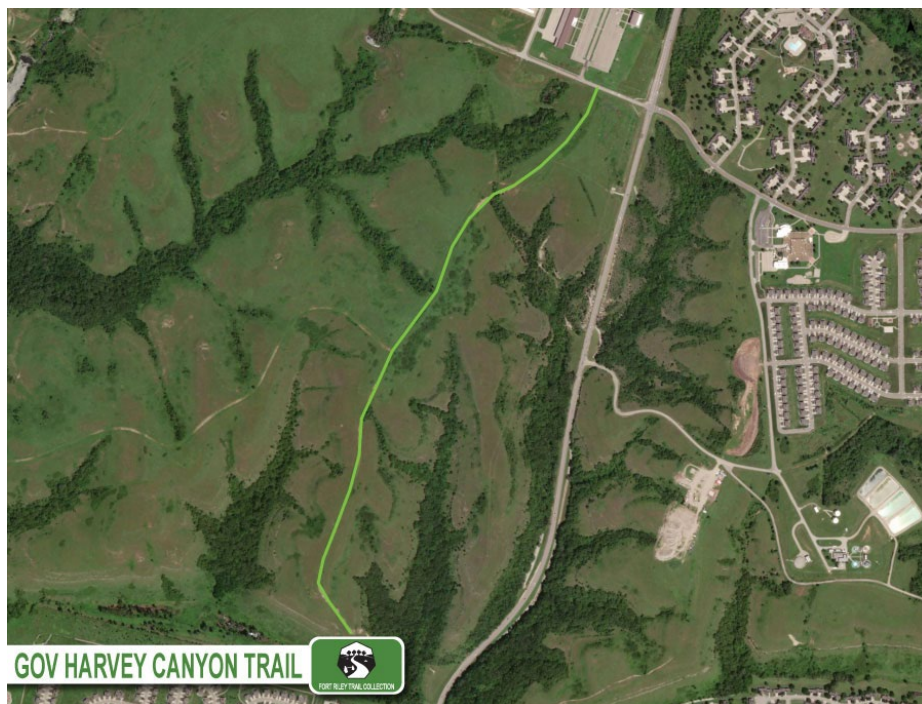
Fort Riley Trails. U.S. Army. (n.d.). <https://home.army.mil/riley/index.php/about/things-to-do/post/fort-riley-trails>.

Figure 10: 1st Division Road Trail



Fort Riley Trails. U.S. Army. (n.d.). <https://home.army.mil/riley/index.php/about/things-to-do/post/fort-riley-trails>.

Figure 11: GOV Harvey Canyon Trail



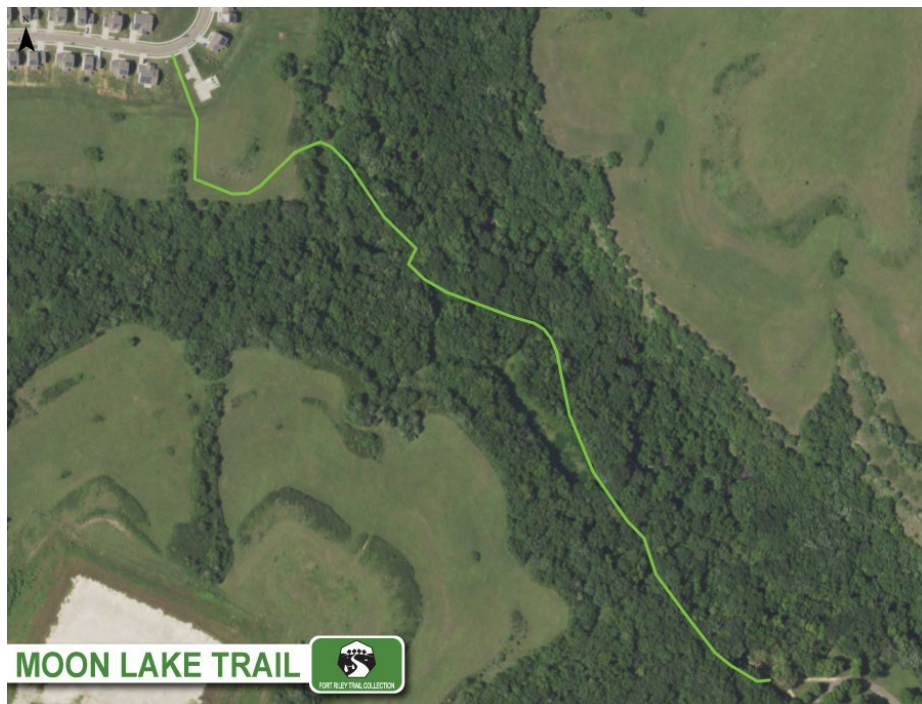
Fort Riley Trails. U.S. Army. (n.d.). <https://home.army.mil/riley/index.php/about/things-to-do/post/fort-riley-trails>.

Figure 12: JC River Walk Trail



Fort Riley Trails. U.S. Army. (n.d.). <https://home.army.mil/riley/index.php/about/things-to-do/post/fort-riley-trails>.

Figure 13: Moon Lake Trail



Fort Riley Trails. U.S. Army. (n.d.). <https://home.army.mil/riley/index.php/about/things-to-do/post/fort-riley-trails>.

These initiatives and projects that Fort Riley continues to promote shows their acknowledgment of the connection between work by the DPW, MWR, and their effects on wellness in the military community.

Well-Being

The original verbiage that for this report was quality of life, which shares some similarities to well-being in definition, but ultimately well-being provides a stronger link between literature and recreational facilities. The interest in this report originated in mental health in general, but this terminology is not likely to appeal to installations, and therefore would result in a lack of support because of the stigma for military installations and mental health. I believe this is seeded in the high rates of suicides and mental health disorders that the military has. Both PTSD and suicide are topics that are sensitive and important but focusing on the goal of increased well-being instead of the negative side-effects that can incur, results in a more favorable relationship to gain access to information and results.

For this study, I focus on the definition of well-being defined by Diener, Lucas, and Oishi:

“Subjective well-being is a broad category of phenomena that includes people's emotional responses, domain satisfactions, and global judgments of life satisfaction” (Diener, et al. 2000).

They acknowledge that situations and events affect emotion and mood and, in turn, moods and emotions are how subjective well-being can be evaluated. The situation or event that is focused on in this study is recreational facilities. Linking mood and recreation, Hull et al. (1995) acknowledges a direct correlation between mood and recreation of all kinds- not just outdoor or physical. Their studies find that recreation of 2 hours or less can improve mood significantly.

The goal of this study is to explore the utilization of recreational facilities on post by single soldiers to identify if these facilities are having a positive effect on their well-being. Diener et.al. (2000) recognize that there are several factors to well-being that are not all externally related, but there is a connection between pleasurable events and pleasurable effects. For example, a single soldier choosing to utilize a walking trail every day recreationally is a great indicator that they are receiving a pleasant affect from it, therefore increasing their well-being. In addition to positive correlations identified by Hull et al. (1995) between recreation and mood, recreational facilities specifically affect the physical well-being of community members as well. Godbey and Mowen have found that with increased numbers of outdoor recreation, there are increased levels of physical activity (Godbey & Mowen, 2010).

Through the studies of Diener at al., Hull (2000), and Godbey and Mowen (2010), we can draw the conclusion that increased levels of recreation can improve both physical and emotional well-being of community members.

Methods

Ideally, time would have allowed for surveys and interviews both to be conducted, leading to a deeper insight to how single soldiers view and use recreation on Fort Riley. Unfortunately, some constraints led to surveys only. In anticipation of this, the surveys were made to be as inclusive of potential interview questions as possible. Listed in Appendix A are the survey questions used and in Appendix B are the Interview questions produced. Questions were broken up into two categories. First, general questions about recreation- including time of day and amount of time weekly soldiers spend recreating. Second, specific questions about recreational facilities listed on Fort Riley. 41 total facilities were listed, and multiple questions were asked about the set of facilities.

While the interviews were unable to be conducted, the surveys provided results that are useful to Fort Riley, other installations, and built environment professionals in general.

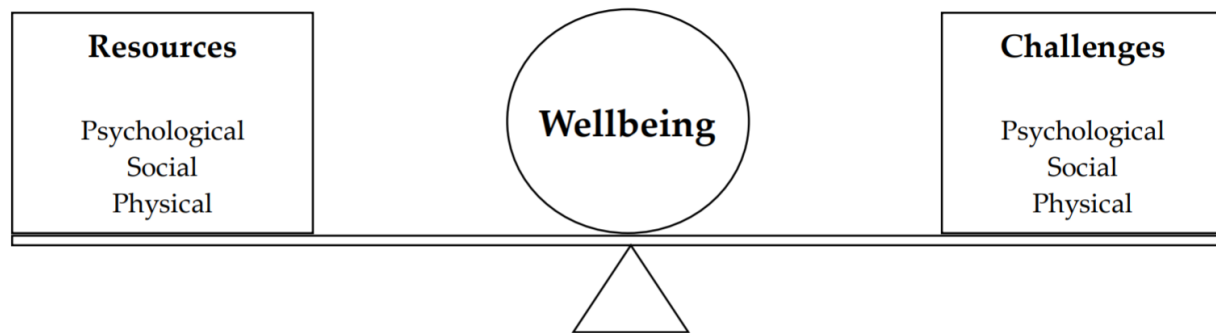
Chapter 2: Literature Review

Wellbeing, Quality of Life, Health, and Place Attachment

When conducting research, there was a variety of terminology that satisfied my intentions with my studies. Wellbeing, Quality of life (QOL), Health, and place attachment are often used in similar ways but can mean different things to different disciplines. This section reviews these terms and acknowledges those similarities and differences.

The challenge of defining wellbeing (Dodge et al. 2012), an interdisciplinary review of the definition of wellbeing, acknowledges the difficulty the world of research has faced in defining wellbeing. Many previous ‘definitions’ have simply been descriptions and attributes instead. For this reason, wellbeing is defined as “the balance point between an individual’s resource pool and the challenges faced” (Dodge et al. 2012, pg. 230). Figure 14 helps demonstrate the definition. The wellbeing circle is defined as a point of homeostasis where one will move and counteract in reaction to challenges and/or resources. This description helps give a ‘living’ definition to wellbeing and what it can mean in different circumstances. In addition, authors pride this definition as being simple, universally applicable, optimistic, and able to be used as a basis for measurement. (Dodge et al. 2012)

Figure 14: Homeostasis



(Dodge et al. 2012, pg. 230)

Comparisons of social well-being components and perceived quality of life indicators in rural Kansas counties is a local master's thesis (from Kansas State University) that focuses on determining well-being based on criteria such as income, wealth, employment, living environment, health, education, social order, social belonging, and recreation and leisure.

Although written in 1973, the analysis of the quality of life and social well-being proves to be relevant today. Lambert, the author of this thesis, uses both *quality of life* and *social well-being* in this thesis and defines them to avoid confusion or the notion that they mean the same thing. Quality of life, in Lambert's thesis, refers to expression of satisfaction with social conditions while social well-being refers to a measured state of social conditions. In other words, Lambert argues that quality of life is more qualitative-based and social well-being is more quantitative-based. (Lambert, 1973)

In the article *Health, Health-related Quality of Life, and Quality of Life: What's the Difference?* Karimi and Brazier (2016) delve into the three terms: health, health-related QOL, and QOL. With a complicated past, it can hard to distinguish between these terms in literature. Authors of this article conclude that HRQOL is dependent on self-perceived health status, but that

researchers should abstain from this term to avoid confusion, and, instead, use the QOL and Health and how they affect each other. Quality of Life is defined in multiple ways in this article- “a conscious cognitive judgment of satisfaction with one’s life”, “an individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns”, and “an overall general well-being that comprises objective descriptors and subjective evaluations of physical, material, social, and emotional well-being together with the extent of personal development and purposeful activity, all weighted by a personal set of values” (Karimi & Brazier, 2016, pg. 646). These definitions were used to show the differences in perspective on QOL according to different discipline and research. While health is defined as “a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity” (Karimi & Brazier, 2016, pg. 646).

Well-being and place attachment are linked together as place attachment bonds are associated with increased well-being (Scannell & Gifford, 2017). Scannell and Gifford define place attachment as the bond between a person and a place that creates emotion (Scannell & Gifford, 2017). The keys to well-being regarding place attachment are belonging, control, self-esteem, and meaning (Scannell & Gifford, 2017). Ultimately, a greater attachment to community leads to increased happiness and satisfaction with life (Scannell & Gifford, 2017).

According to Strzelecka et al. (2017), place attachment “concerns the positive emotional bonds that develop between individuals and their socio-physical environment” (Strzelecka et al., 2017 pg. 61). Living in a place and gaining ‘mastery’ over certain aspects of the environment can promote empowerment that can come in the form of psychological, social, and political (Strzelecka, Boley, & Woosnam, 2017).

Similarly, Qingxiong et al. (2018) defines place attachment as “the bonds and connections that people develop with places” (Qingxiong, et al, 2018, pg. 78). Place attachment can be related to one’s neighborhoods, home, city, and even region (Qingxiong et al., 2018). This study finds that people with high turnover are said to not have as strong of a sense of place (Qingxiong et al., 2018), which is an important finding because relocation of military members occurs every one to two years on average (Hoshmand & Hoshmand, 2007). Hoshmand and Hoshmand acknowledge that relocation this often can be harmful because it “removes military families from the support system of extended families and hometown communities, with conceivable impact on their community belonging” (Hoshmand & Hoshmand, 2007, pg. 171–172).

Worth noting is the idea of ‘sense of community’ defined as “a social psychological variable that we define from a military/base perspective as reflecting the degree to which members feel positively attached to the AF/military as an organization and view the base community as a source of support and connection to others and to the institutional AF” (Bowen et al. 2003, pg. 33). This definition closely aligns with place attachment and results by Bowen show that support is a key part of creating this sense of community (Bowen et al., 2003).

These studies find that place attachment and sense of community can promote well-being and give community members a sense of empowerment in their surroundings but can also suffer if a person does not stay a community consistently or for long or does not have a support system.

Facilities

Military Facilities

Military facilities can be broken down into 10 different categories; administrative, hospital and medical, maintenance and production, operations and training, research-development-test-evaluation, supply, utilities/ground improvements, family housing, community, and troop housing and mess (Department of Defense, 2017). Part of the job of built environment professionals in the department of defense is to maintain these buildings, fulfill requirements, and not exceed the designated number of facilities determined to satisfy the need on installations.

As shown in Figure 15, in both 2012 and 2019, there was an excess in facilities for all departments of the armed forces. This is an important factor in the planning and design of installations and guides what can be done in terms of adding facilities.

Figure 15: Excess Facilities

Department	Estimated Percentage of Excess Capacity (above 1989 baseline) FY 2019 Force Structure	Estimated Percentage of Excess Capacity (above 1989 baseline) FY 2012 Force Structure
Army	33	29
Navy	7	6
Air Force	32	28
DLA	12	13
Total DoD	22	19

(Department of Defense, pg. 20)

Recreational Facilities

Harrington, Jarvis, & Manson, (2017, pg. 1) makes the argument that “the places where we live, work, play, and interact with others can have an overarching influence on physical activity, and

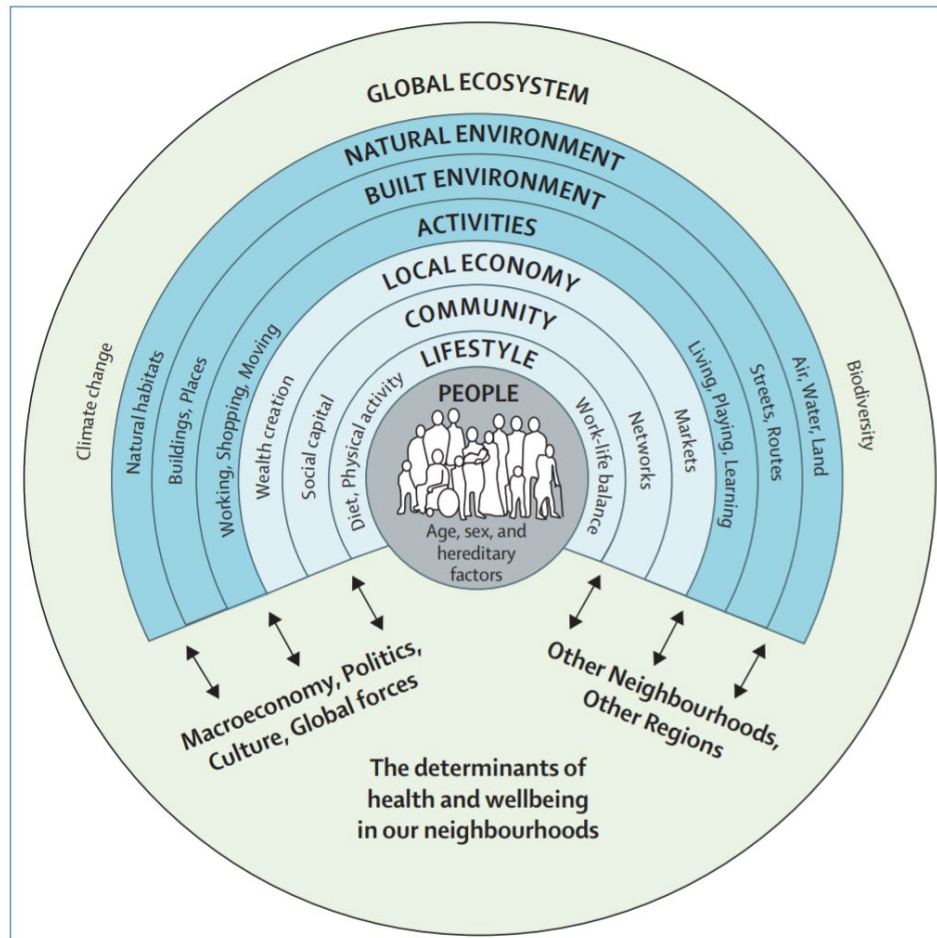
ultimately contribute to rates of overweight, obesity, and cardiovascular disease”, connecting recreational facilities and the surrounding built environment to health. Specifically, Harrington et al. (2017) note recreational facilities as a place to foster the connection between activities and health. Additionally, Kundziņa & Grants (2018) acknowledges the strong ties between physical activity and well-being. Physical recreation activities enhance well-being through biochemical, physiological, and psychological means (Kundziņa & Grants, 2018). Availability and accessibility of these facilities are key to a healthy neighborhood (Harrington et al., 2017).

Built Environment

Rao et al. (2017) acknowledge the important relationship between the built environment and health, and that the neighborhood is a crucial health setting for community members. Asthma, obesity, and diabetes are all chronic disorders in our society today that are left unchecked by built environment professionals. Though when designing the built environment, there are many aspects that must be considered, sustainability being one of the hot topics. The built environment can be defined as “encompassing all buildings, spaces, and products that are created or modified by people” (Rao et al. 2007, pg. 1111). The built environment is not limited to outdoor environments, but encompasses indoor and social environments as well, as shown in Figure 16. Rao et al. (2017) call for the collaboration between public health and built environment professionals to learn from each other, communicate in a more efficient manner, and problem solve in a way that better serves their community. These professionals can make changes in noise and light pollution, green spaces, and trails and paths for walking and biking to benefit the health of their community. Authors call for a “shift in the way professions work together to translate

our growing understanding of the link between the built environment and health and wellbeing into real and effective action” (Rao et al., 2007, pg. 1113).

Figure 16: Health map for local human habitat



(Rao et al., 2007, pg. 1112)

Smith et al. (2017) finds the built environment truly has an impact on physical activity, and, therefore, wellbeing. Noted specifically in this research as being determinants of physical activity are mixed land use, density of population, connectivity, and neighborhood design. The quality of the built environment also plays a factor. Their findings conclude a significant positive impact on physical activity by the built environment. (Smith et al., 2017)

Nunez-Gonzalez et al. (2020) brings into light the mental health and well-being relationship and, therefore, the mental health and built environment relationship. Mental health, defined as “the well-being of the individual and the sum of his/her abilities to contribute to the community and adequately handle the daily stages of stress” (Nunez-Gonzalez et al., 2020, pg. 1) is important in communities as twenty five percent of the general population struggle with mental health problems. Nunez-Gonzalez et al. (2020) define built environment as a “broad term that encompasses the man-made physical elements of the environment such as homes, buildings, streets, open spaces, and infrastructure, which could have an impact on the physical and mental levels of the person and the health of a community” (Nunez-Gonzalez et al., 2020, pg. 2).

Military Families

Most previous research regarding the military and the community has focused on military families and children. Although this report is not a focus on these families, reviewing literature with this focus can help better understand the community as a whole. Because more than half of service members have family duties that include spouses or children- approximately 1.1 million spouses and 1.9 million children, it is no surprise that so much research has been focused in that direction (Southwell & Wadsworth, 2011).

Military family dynamics are changing. There has been an “increase in the result of societal trends such as the increase in the number of women, single parents, and dual-earner and dual-career couples in the workforce, which have also taken place among those serving in the military” (Burrell, Adams, Durand, & Castro, Pg. 43-44). To understand the individuals and the parts they play in a family, you must first understand the family system. A big factor in the

difference of these family systems compared to civilian families is the co-parenting aspect. When a parent is deployed, the dynamic of parenting completely changes (Lester & Flake, 2013).

Stressors for military families include deployment, finances, housing and home ownership, foreclosure, substance abuse, incarceration, and even homelessness (*Strengthening Our Military Families*, 2011). However, these are also stressors for single soldiers. Much like for military families with children, stressors are exemplified when service members are separated from their families. Reasons for separation may vary between field training, school, or deployment (Burrell et al., 2006). Additionally, families often feel that they represent their service member and their rank which hold them to a higher standard (Drummet, Coleman, & Cable, 2003). Unfortunately 27,312 divorces took place between military families in 2009 alone, no doubt that these additional stressors take their toll (Huhtanen, 2010).

Some suggestions for improving the strength of military families includes: increasing mental health care services, building awareness of mental health dangers, protecting and preparing families in advance to financial burdens, addressing and getting rid of homelessness among veterans, keeping military children and their development in mind, and creating opportunities for military spouses (*Strengthening Our Military Families*, 2011). Some findings indicate that higher communication results in positive outcomes for all family members. This may be because of the bridge that seems to build to close the gap of both physical and psychological absence of the deployed family member. This positivity carries on into the reintegration of the deployed member (O Neal et al., 2018). For stressors specific to deployment, recommendations to support families are building on resilience of military families, address stress and the deployment cycle, maintain rules and routines, help with parent and child coping/anxiety, help with transitions, encourage parents to maintain a united front, support parent and their stress, create strategies for

regulating emotions, and providing a balance of encouragement and discipline (Gewirtz, Erbes, Polusny, Forgatch, & Degarmo, 2011).

Military Spouses

Impact specifically on military spouses during deployment includes psychological distress, depression, sleep problems, anxiety disorders, stress, adjustment disorders, disrupted communication, and financial/ occupational stress (Gewirtz et al., 2011)

Military Children

Children are impacted by military life and the hardships of deployments, moving, as well as enduring second-hand stressors that the whole family feels and is magnified by the crucial development time they are experiencing (Thomas, 2013). There are 2 million military children with active duty parents, 2 million children of veterans, 90,000 children born to active duty military members every year, as well as many children with siblings enlisted (Lester & Flake, 2013). Some challenges include moving every two to three years, school disruption, social disruption, learning a new culture, safety concerns for deployed parent as well as home life. In addition, lack of uniformity between school systems is can be a challenge (Lowe, Adams, Browne, & Hinkle, 2012). Henson claims that families are not well prepared for the effects that a deployment can have on a developing child. Because of this, children often lack the amount of support they need, but this responsibility is not solely the parents' (Henson & Henson, 2015). This is where the community has an opportunity to step in and provide solutions within the community for children experiencing a military lifestyle, such as family-based prevention programs for youths, prevention-oriented psychoeducation, skills training, cognitive behavior therapy, communication skills, group processing (Guzman, 2014).

Military Children and Deployment

Deployment specifically can cause distress, depression, anxiety, and school transitional hardships on children (Gewirtz et al., 2011). Two million children have been affected by the absence of a military parent during deployment since Iraq and Afghanistan) (Guzman, 2014). Difficulties during deployment vary according to children ages, gender, mental health of non-deployed parent, housing situation, etc. Similar variables influence how reintegration (when deployed parent returns) influences children. Additional factors include how long the deployment was and how difficult the deployment was for the family (Chandra, 2010). Because of all these factors, children in military families are more likely to experience “...emotional or behavioral difficulties than their civilian counterparts. As a result, at least some military families may require more assistance in addressing their children’s needs, via school programming, mental health services, or resources that can be used in the home..” for families that experienced longer deployment times, “...these families may benefit from targeted support to deal with these stressors at later points in the deployment, not simply during initial stages. Further, families in which non-deployed caregivers are struggling with their own mental health may need more support for both caregiver and child. Girls and older youth are confronting more difficulties with deployment and reintegration, thus they may require more assistance” (Chandra, Pg. 8).

Challenges faced by Soldiers

Deployment

Deployment is an event that many service members face. In fact, 2.4 million service members have deployed since October 2001 through three missions- Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) (Ross & Devoe, 2014).

Although many only consider the actual deployment and its challenges, there are several stages of deployment that affect service members. Pre-deployment, deployment, sustainment, re-deployment, and post-deployment are all stages to acknowledge when considering stability in military member's lives. Stability follows a bell-shaped curve when considering the variables listed above which indicates the relationship between stability and these factors (Sheppard, et al., 2007). For example, there may be many stressors on service members leading up to the deployment, such as transfer of financial responsibility, legal preparation, preparation for potential death of service member, medical preparation, as well as emotional preparation (Southwell & Wadsworth, 2011). During the actual deployment, there is always the concern for safety as well as rumors about occurrences that could cause unnecessary stress (Burrell et al., 2006). Often unnoticed by outsiders, the return can be just as disruptive as the departure on schedules, roles, and norms, with a major stressor being uncertainty. Although departure and return dates are usually given, they are often off track due to changes in orders or environments. Early departures, as well as extensions, can make this stressor even more difficult. The extended family can experience additional stress when moving to new locations due to the absence of physical support from other family and friends (Henson & Henson, 2015).

Importance of Health and Wellness

Individual health is an important aspect of military installations because it is a vital component to community health. Instead of focusing on one health problem, one set of people, or one community problem, Corburn (2015) calls for a "more integrated and holistic approach to 'city planning as preventative medicine,' where interventions combine attention to physical, social, and institutional factors that shape urban health" (Corburn, 2015, p. 48). A relationship between healthcare professionals and city planners should be explored and furthered because "city

planners are increasingly being asked to ‘design’ healthier communities, but frequently lack the political influence or biomedical knowledge to do so” (Corburn, 2015, p. 48).

When returning from deployment, one major concern is Post Traumatic Stress Disorder (PTSD) because of the increased likelihood for its development in combat (Devoe et al., 2018). Because deployment frequency has increased since the events of 9/11, negative side effects, including PTSD, have also increased (Devoe et al., 2018) with 19.8% of military members incurring symptoms of PTSD as well as depression and anxiety upon returning home (Ross & Devoe, 2014). Further, PTSD is a concern not only for those who develop it, but also for those surrounding them due to extreme stress within relationships between parents and their children, as well as between spouses. Acknowledging this problem and addressing it are the first steps to changing it, (Devoe et al., 2018), but unfortunately, military families don’t always feel that they have the resources needed to address it (Wizelman, 2011).

PTSD is often comorbid with other afflictions, including violence and a variety of other potentially dangerous symptoms such as mental health disorders and heavy drinking (Macmanus et al. (2012)). Other impacts of deployment on service members include substance abuse, difficulty sleeping, irritability, difficulty concentrating, family challenges, divorce, and anger problems (Gewirtz et al., 2011).

In addition to lived afflictions, military suicide is a serious problem and one of the leading causes of death among active-duty members (Kim et al., 2019). Understanding factors that contribute to this problem is the best way to create and develop programs to counteract and decrease the risk of suicide. Known factors of suicide include combat exposure, PTSD, and military hazing (Kim et al., 2019). Hazing includes abusive language, threats, non-physical forms of aggression, and

both major and minor physical abuse (Kim et al., 2019). Reduction in suicide rates, especially because of the strong implications it has in this community, is a part of developing a healthy, safe community.

These challenges are good reasons to plant a focus on our military members and their communities and give them recreational facilities that they use and enjoy.

Military Communities and Planning

To plan effective communities, a successful community must be defined. Wombacher et. al (2010) present a definition of sense of community as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met by their commitment to be together” (Wombacher, Tagg, Bu, & Macbryde, Pg, 672). Although identical lifestyles, jobs, or ideologies are not necessary to develop a strong community, lack of community relationships are often effects of politics, family feuds, lack of leadership, racial/religious tensions, and/or lack of unity between organizations (Gwin, 1925).

A strong sense of community requires that these ideologies are present (Wombacher et al., 2010 p.672):

1. *Needs Fulfillment*, or the feeling that members’ needs will be met by the resources received through their group membership.
2. *Membership*, or the feeling of belonging and of sharing a sense of personal relatedness.
3. *Influence*, or the sense of mattering, of making a difference to a group and of the group mattering to its members.

4. *Shared Emotional Connection*, or the commitment and belief that members have shared and will share history, common places, time together, and similar experiences .

Bowen states that military communities and “their structure and functions continue to become more and more like civilian communities”, especially with the growth of military communities (Bowen et al. 2003, pg. 33).

While military communities embody aspects of civilian communities, such as those listed above, they have a few other dynamic features.

The following trends reflect how the future military community may look:

- 1.) Rising number of married military members (which tends to draw families off base and into surrounding communities)
- 2.) Rising diversity of military members in values and lifestyles as well as demographics
- 3.) Privatization and Outsourcing (increasing the number of civilians on bases)
- 4.) Increasing likelihood of creating mega-bases (mixing branches and cultures)

(McClurre & Broughton, 2000)

Veteran Care

In military communities, sometimes forgotten is the responsibility to take care of service members when they are done serving their time. This is a growing problem as the number of veterans are growing (even though the number of enlisted service members has decreased) (Gillivas, Kilmer, Larson, Armstrong, & Carolina, 2017). Many forms of support and care can be

made available in communities to support veterans. According to Ramchand & EtAl., pg. 17 (2014), these are all options for care of veterans:

“• Respite care: Care provided to the service member or veteran by someone other than the caregiver in order to give the caregiver a short-term, temporary break

• Patient advocate or case manager: An individual who acts as a liaison between the service member or veteran and his or her care providers, or who coordinates care for the service member or veteran

• A helping hand: Direct support, such as loans, donations, legal guidance, housing support, or transportation assistance

• Financial stipend: Compensation for a caregiver’s time devoted to caregiving activities and/or for loss of wages due to one’s caregiving commitment

• Structured social support: Online or in-person support groups for caregivers or military family members (which may incidentally include caregivers) that are likely to assist with caregiving-specific stresses or challenges

• Religious support: Religious- or spiritual-based guidance or counseling • Structured wellness activities: Organized activities, such as fitness classes or stress relief lessons, that focus on improving mental or physical well- being

• Structured education or training: In-person or online classes, modules, webinars, manuals, or workbooks that involve a formalized curriculum (rather than ad hoc information) related to caregiving activities.

• Health care: Mental health care that is (1) offered outside of routine or traditional channels such as common government or private sector payment and delivery systems, or (2) offered specially to caregivers.

- Mental health care: Health care that is (1) offered outside of routine or traditional channel such as common government or private sector payment and delivery systems, or (2) offered specially to caregivers” (Ramchand & EtAl., 2014).

Gil-rivas et al., 2017, focuses on reintegration of veterans into the civilian community, but notes many intricate factors that can make the process very difficult. Ultimately, this study calls for a focus on factors that promote wellness in the community instead of a focus on dysfunction. Gil-Rivas et al. (2017) promotes a few recommendations that built environment professionals could pursue to promote this reintegration. One is a call to focus on accessibility, integration, and coordination of services (Gil-rivas et al., 2017). Another is to leave behind professional services and focus on providing community and opportunities to connect with the natural environment (Gil-rivas et al., 2017).

Continuing to care for soldiers after they no longer are able to serve, is an important and sometimes overlooked aspect of military communities.

Conclusion

There is a large expanse of literature that delves into the intricacies of wellbeing (and like terms), discussing the correct usage and actual definition. In addition, there remains a large amount of military literature- although mostly focused on family and children. Focusing in on recreational facility use by single soldiers on installations is a very narrow research category with little to no specific research previously conducted. Outside, or more general research, can show this importance nonetheless, and frame the following study.

Chapter 3- Methodology

Study/Project Design

The actual study/project design differed from the intended one in a few ways. First, there was not enough time to complete both surveys and interviews. Originally, surveys were to be utilized followed by semi-structured interviews with military members who live in single-soldier housing. To gather necessary data These contacts were to be from Little Rock Air Force Base and Fort Riley. When not enough surveys were taken by soldiers at Little Rock Air Force Base, we had to drop down to just surveys taken at Fort Riley. Finally, the process of getting single soldiers to complete the survey happened differently than intended for a variety of reasons.

There were several bumps in the road that were not anticipated and affected the anticipated timeline. First, the IRB requested a form from both of the installations that I intended on surveying and interviewing. This led to months of waiting to get the forms to pass the IRB. Once these were turned in, the IRB was passed and the surveys were sent to the contacts at both installations. From here, it was expected that the surveys would be released and open for about two weeks to receive 20 responses from participants at each installation. This did not happen either. There was talk about how to advertise and if it was even possible to offer the incentive (free appetizer cards from Texas Roadhouse). During this time of finding the best way to initiate survey interaction, the Coronavirus was still affecting work for these installations. In addition, Little Rock Air Force Base (LRAFB) was hit with a massive storm that flooded and damaged buildings on base.

Because of these time-burdens, surveys were completed behind schedule and, therefore, left no time to conduct interviews. In anticipation of this occurrence, the survey was created to be able to stand alone if need be.

Dropping down to Fort Riley became the best option once over 20 survey results were gathered. LRAFB resulted in 5 total results, not enough for accurate analysis. Between the Coronavirus and all of the catch-up work associated with getting back on base, and the storm, the surveys were, understandably, pushed to the back-burner. In my future career at Little Rock Air Force Base, I hope to be able to conduct similar surveys to provide results for the base.

The intended mixed method research involved a qualitative survey with an expectation of receiving feedback from 40 soldiers who reside in single-soldier housing, followed by a selection process including up to 8 soldiers for a qualitative interview, but gathering enough surveys to create an analysis was perhaps the most difficult part of completing this project. Two variables contributed to this method being unsuccessful. One, working with the military, and two, relying on others to get the surveys taken. Working with the military is always challenging in that there are a plethora of rules, regulations, and guidelines that must be followed. This always leads to more hoops to jump through. As mentioned previously, installations did not want to advertise the Texas Roadhouse appetizer cards, which were a big incentive for participation. In addition, the military does not have an easy process to grant access to military members for surveys so this took a lot of time and problem solving to find a process that worked. Originally, the surveys were to be administered online. The advantage of this approach is that a wide range of data can be collected from a large number of participants, creating a substantial amount of data and results (Leavy, P. (2017)). Leavy (2017) acknowledges the benefits of surveys to quantitative research (specifically online) as making survey takers feel anonymous.

Fort Riley worked with me to produce surveys similar to the ones that I had designed but gave them out under the Morale, Welfare, and Recreation division (MWR). The surveys were printed off and handed out to single soldiers at an event for single soldiers. 18 of the surveys were taken at that time.

Although the process did not go as planned, there was a lot to be learned from the experience overall. As laid out in this report, military communities are important, and being able to survey and study them is crucial to making voices heard and improving conditions and well-being.

Creating a program that helps improve and make this process easier would, in my opinion, be a move in the right direction.

Surveys:

The created survey, (see Appendix A), is a series of quantitative questions regarding the single soldier's awareness and use of recreational facilities on base/post as well as the impact that they perceive the facilities have on their well-being. These surveys were to be delivered through email to help maintain anonymity but were instead given out in paper at a single soldiers' event.

Surveys have proven to be a very effective way to gather information (especially qualitative) regarding people's attitudes (United States Department of Veterans Affairs, 2019). A survey is necessary in this case because there are not many case studies that already address this topic, thus necessitating new data. A survey leads to more quantitative data because of the amount of surveys that can be distributed versus the number of interviews able to be conducted. With a limited amount of time, surveys will help gather data to support this report even if only minimal interviews are able to be conducted. The goal from these surveys was to gain quantitative data

regarding single soldiers' relationship with recreational facilities on base/post with ideally 20-30 responses from each post/base.

Analyzing

Answers and experiences were to be analyzed to create a better understanding of how single soldiers utilize the existing built environment as well as determine possible additions or demolitions that would prove most effective regarding perceived increase in well-being for single soldiers.

The quantitative data was to be collected and represented in graphs to display usage of recreational facilities and knowledge of recreational facilities. A map of these facilities in combination with this data could also prove insightful if distance from barracks is a factor for single soldiers.

The qualitative data would allow a narrative to be formed for the report.

Intended Timeline

Table 1: Timeline

October 22, 2020	Finalize Committee Members
November 3, 2020	Final Proposal to Susmita
November 20, 2020	Revised Final Proposal to committee

November 20, 2020	Program of Study Submitted to Grad School
November 30, 2020	Preliminary Master's Report Reviews
January 15, 2021	Revisions Due to Allow Spring Enrollment
January 25, 2021	Draft MR Doc Check
February 15, 2021	Substantial Completion Draft Due
February 22,23,24,25, 2021	Substantial Completion Reviews
March 22, 2021	Final Report Draft Due
March 26, 2021	Approval to Schedule Final Exam Form Due to Graduate School
April 1,2,5,6,7,8,9, 2021	Final Defense Presentations

April 16, 2021	Final Exam Ballots Due to Graduate School, ETDR Upload Due
May 10,11,12,13,14, 2021	Finals/ Commencement Exhibit

Table 1 shows the timeline set by the school. This was one of the guiding factors for progress in the report.

The total timeline of the survey was to span over two weeks. First, access to the participants is a crucial part of the process, and access to single soldiers living on both Little Rock Air Force Base and Fort Riley were to be gained through surrogates. These surrogates work on the installations and would provide the email addresses of the single soldiers that are living on post/base.

Once access to these emails had been gained, the surveys would be sent via email. Qualtrics is the method by which the surveys in the email would be created.

In addition to the Qualtrics survey link, the email would also contain information on how every person who completes the survey will receive a coupon for a free appetizer at the Texas Roadhouse nearest to their location. This would be the main incentive for participants, but the surrogates would also have an opportunity to express the importance of the survey to the planning of the installation to participants.

Participants were to have a total of two weeks to complete the survey. Participants who did not fill out the survey after a week would be sent a reminder email. The reminder email contains the survey link as well as the information within the first email. One more reminder email would be

sent out the final day that the survey can be completed explaining it is the last day to take advantage of the opportunity.

Finally, after the two weeks of collecting surveys, the survey is closed and not available for any more participants. Incentives would be sent to participants upon completion of the survey.

Actual Timeline

There were many changes to the distribution method of the surveys, these changes affected the timeline significantly. Fort Riley was not able to send the surveys through email and instead posted them on a webpage that single soldiers had access to. For this reason, the 2-week timeline with a reminder survey was not an option. Instead, the plan was to have the survey available until 20-50 surveys were received. When no surveys were being taken, other options had to be investigated. This is when the decision was made to print out the surveys and hand them out at a single soldier event. 18 of the 21 surveys were collected in one afternoon but after months of trying to gain participation.

Chapter 4- Analysis and Discussion

Expected outcomes/impact

The expectation of the report was to gain a deeper understanding behind what facilities have the most impact on single soldiers. A hypothesis was that there will be findings that show that facilities could be better utilized by providing different programs, adjusting times that facilities are available including open and closed times, and providing more awareness of the availability of those facilities to single soldiers.

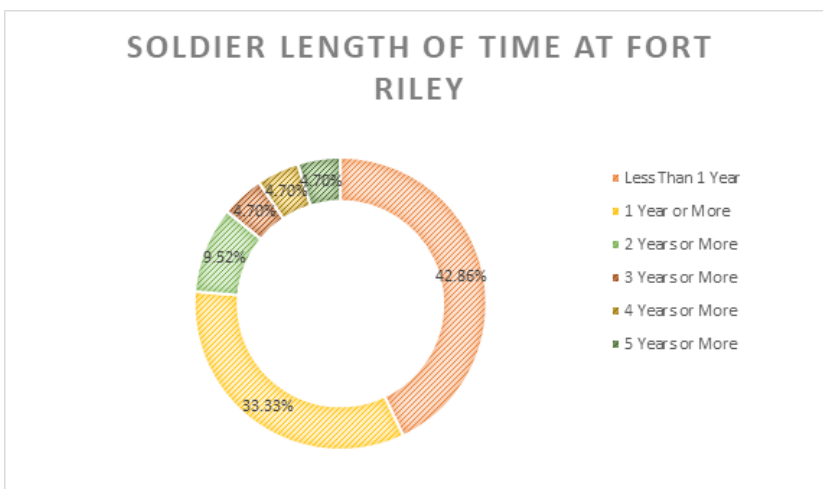
An expectation was that the outcome of this research would assist in better understanding the relationship between military members and their built environment on installations. The impact that it should have is to give direct feedback to Little Rock Air Force Base and Fort Riley about what is working in this regard, and what could be changed or improved for the increased well-being for single soldiers living in the barracks. In addition, all military installations could use the data collected to determine how to better use existing built environments and what projects to implement next to improve the community and well-being of single soldiers on base/post. Eventually, this could lead to future research on what specific projects planners and built environment professionals can do to fulfill needs that may be found in the data collected in this project.

Analysis

Demographic

21 Single Soldiers from Fort Riley responded to the survey sent out. Of the 21, 18 were male, 3 were female, and all were between the ages of 19 and 28. The most common age was 20, with 6 participants being this age.

Figure 17: Soldier Length of Time at Fort Riley



Another factor noted was the length of time that each soldier had been stationed at Fort Riley. With the frequency of moves in the military, it is likely that many participants of the survey had not been at Fort Riley for a long time, which could affect their knowledge and use of recreational facilities. As shown in Figure 17, close to half of participants have been stationed at Fort Riley for less than a year.

Key Takeaways:

- 70% of participants spend less than 10 hours a week recreating
- 90% of participants have more than 10 hours a week of off-time

- There are some indications in surveys that recreation facilities (specifically gyms) on post are not desirable over options off-post
- There are recreational facilities that could be put in place on post or could be a collaboration with the surrounding community that single soldiers would utilize
- There is a lack of knowledge of some facilities
- There is a desire to utilize some facilities that may not be advertised or available during prime recreation hours

Recreation

Important to note first, is the time that soldiers spend on recreation weekly. As seen in Figure 18, Over 70% of participants spend less than 10 hours recreating weekly. This could be reflective of either job responsibilities and hours, or the availability of preferred recreational facilities. This should be noted in comparison with results about how many hours of off-duty time soldiers have, shown in Figure 19.

Figure 18: Average Amount of Time Spent Recreating Weekly

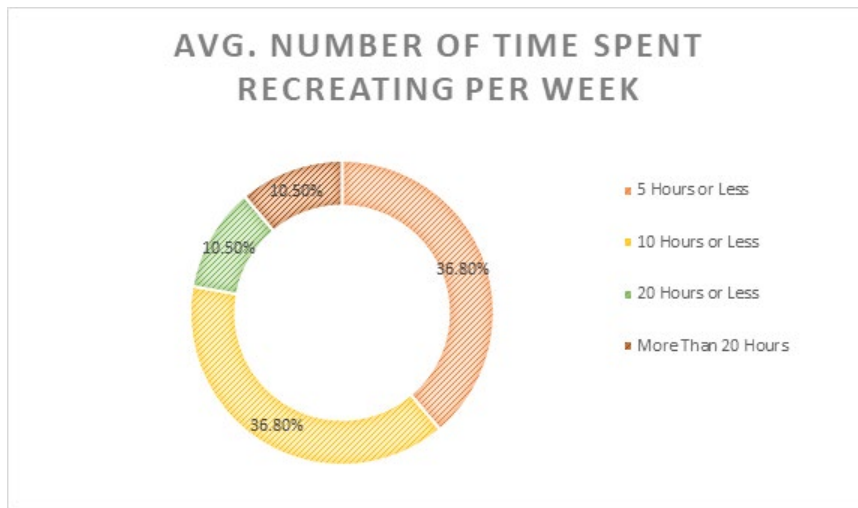
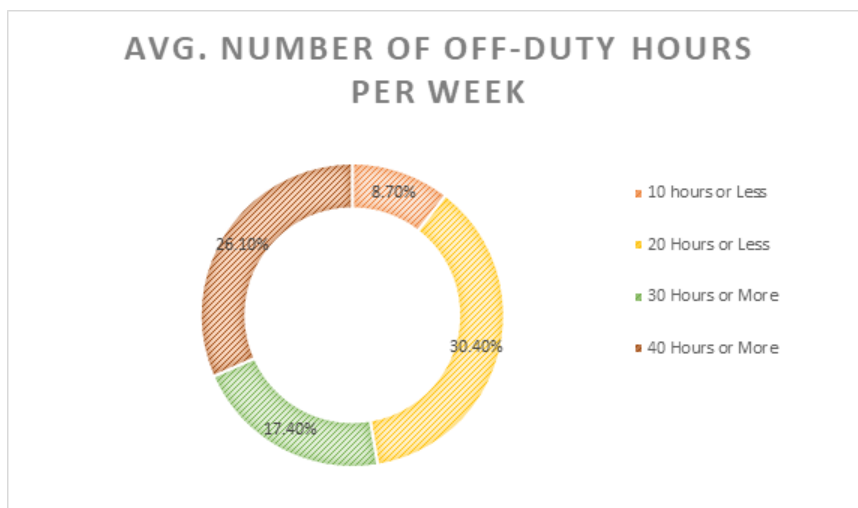


Figure 19: Average Number of Off-Duty Hours Per Week



In Figure 19, participants note hours as high as 60, and less than 10% with less than 10 hours.

This is an indication that it may not be a lack of free time for soldiers, but a lack of recreational facilities that they are aware of, or appeal to them.

Soldiers were asked about recreational facilities that they use off post. Among their answers,

Genesis Health Club was mentioned three different times and was noted as having better

amenities and more to offer than post gyms. Milford Lake was also mentioned by multiple participants as a place that they fish off post. Other recreation that takes place is hiking on trails- mentioned are the Konza and Ogden, axe throwing, shooting ranges, and off-road parks for vehicles. Some of these facilities are offered on post- the gym, fishing, trails, and shooting ranges. Others are not available on post, so their use off-post makes sense- axe throwing and off-road vehicle parks. In a similar question, soldiers were asked what kind of recreational facilities they would utilize if they were available on post. Feedback showed that participants are interested in go-kart tracks, outdoor workout/weightlifting areas, roller skating, and a new gym. One participant said that they could not answer because they didn't know the area well enough. Finally, participants were asked if there were any facilities that they had to find off post or do without. Among the few answers was scuba diving and MMA.

Specific Use of Facilities

In this portion of the survey, participants were given a list of 41 recreational facilities on Fort Riley that are currently available to them. Of these 41 facilities, 6 are gyms, 3 are pools, 2 are shooting ranges, 3 are lakes, 9 are trails, and the rest are as follows:

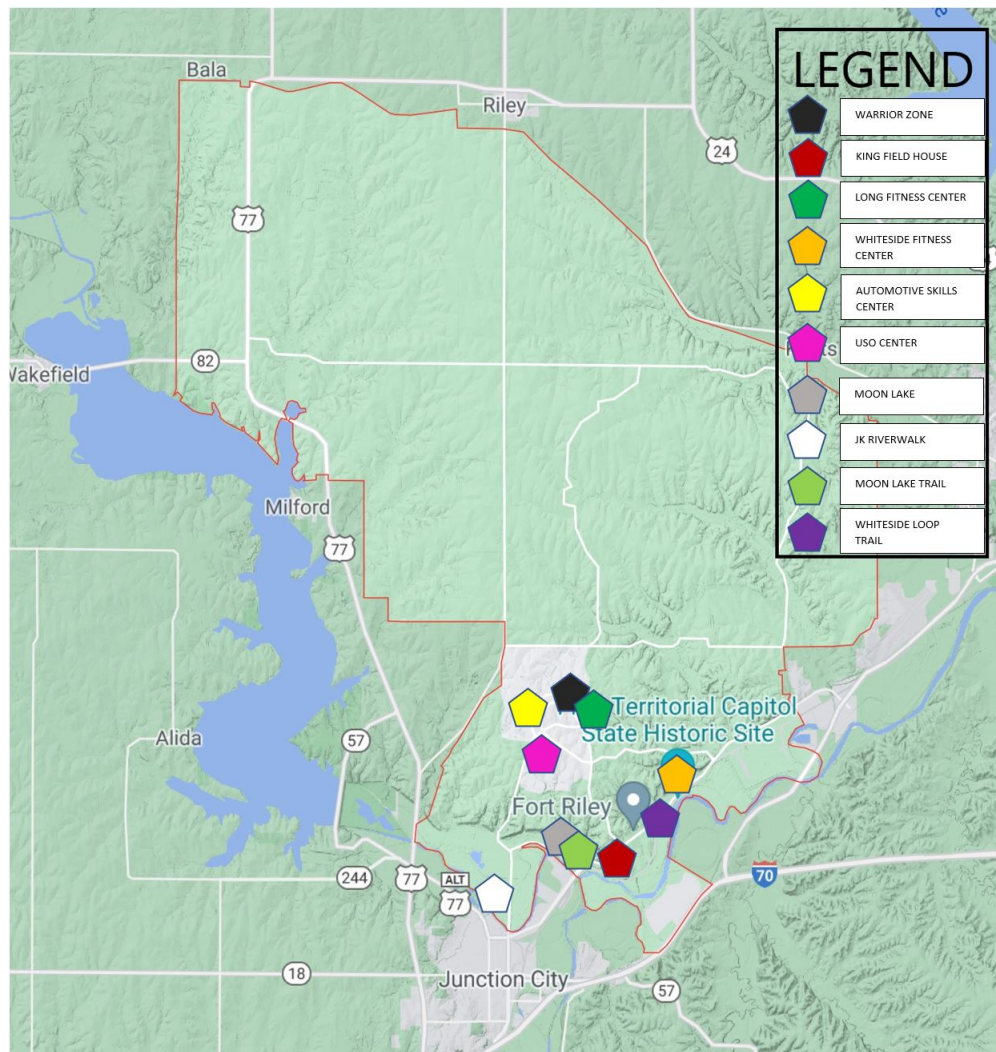
- Hobby Studio
- Warrior Zone
- Spare Time Interactive Entertainment
- Belay Café
- Fort Riley Post Library
- Leisure Travel Center
- Automotive Skills Center
- Riley's Community Center
- USO Center

- Warrior Adventure Quest
- Equipment Checkout center
- Outdoor Recreation Center
- Driving Range
- Rock Wall
- Batting Cages
- Adventure Park
- Hunting/trapping on Fort Riley
- Outdoor sports fields

The first question asked in this section was on the participants' knowledge of the existence of these facilities. Of the 41 facilities, the ones with five or more participants awareness of existence (shown in Figure 20) include:

- Warrior Zone
- King Field House
- Long Fitness Center
- Whiteside Fitness Center
- Automotive Skills Center
- USO Center
- Moon Lake
- JC River Walk Trail
- Moon Lake Trail
- Whiteside Loop Trail
- Fishing on Fort Riley
- Outdoor Sports Fields

Figure 20: Fort Riley Recreational Facilities Map



Some of these facilities are self-explanatory- Long and White Fitness Centers are gyms, the automotive skills center is a place to work on vehicles, lakes, trails, and fishing are as described, and outdoor sports fields are used for recreation leagues and other outdoor sports. Warrior Zone, King Field House, and the USO center may need description for those not on post. First, the Warrior Zone offers soldiers an indoor gaming and computer area as well as table games such as pool, air hockey, and ping pong. In addition, the Warrior Zone has an outdoor patio and fire pit area and basketball court. Next, King Field House is one of the six physical fitness centers

available on Fort Riley. Finally, the USO center is a multi-purpose building that offers food and beverages, lounge areas, table games, gaming consoles, as well as computer access.

These 12 facilities were checked by 5 or more participants with Warrior Zone being the most known facility with 16 participants checking the box.

The next question of this section asked for participants to check all of the facilities that they had ever utilized. 9 facilities had no one check them. The facilities that 10 or more participants had ever utilized were as follows:

- Warrior Zone
- Whiteside Fitness Center
- Moon Lake

All three of these facilities appear on the list of most known facilities on post. For the ‘Check all facilities that you utilize weekly’ question, we see the same trend as the last. The most responses are for the Warrior Zone and Whiteside Fitness Center.

In an effort to identify some recreational facilities that single soldiers on Fort Riley want to utilize but don’t have knowledge of or access to the facility, one question asks participants to check all facilities that they would like to utilize but have not. With five or more responses are the following facilities:

- Skeet and Trap Range
- POF (Private range 4)
- Hunting/Trapping on Fort Riley
- Fishing on Fort Riley

The desire to utilize these facilities is a good indicator that if these facilities were known to the single soldiers and available at times when they are able to recreate, they would be utilized. This can come down to advertisement of these facilities or making sure they are open on weekends and evenings (following trends of when single-soldiers recreate).

Factors and Considerations

There are several things to consider with this analysis- first, the surrounding community. Fort Riley is located less than 30 minutes away from Manhattan, KS, a bustling and active college town. Manhattan is home to Kansas State University and offers a variety of recreational activities, restaurants, and bars. This could affect the outcomes of this study in that an installation without access to a town like Manhattan may rely more on the facilities on the installation.

In addition, accessibility should be considered in this study. From Northwest corner to Southeast corner of Fort Riley is under 5 miles and would take only 10 minutes to travel. This means that any facilities on Fort Riley should be accessible to soldiers from that barracks in a 10-minute drive or less. The many trails on post allow for accessibility for soldiers without cars as well.

Helpful Statistics Moving Forward

Days and times that soldiers choose to recreate can be beneficial in the focus on single soldiers and future recreational facilities. As shown in Figure 22, the most popular days to recreate are Friday and Saturday with Sunday coming in at a close third. As shown in Figure 21, the most popular times to recreate are the evening with afternoon and night comparable seconds. This shows that recreational facilities targeted towards single soldiers should be open Fridays, Saturdays, and Sundays from the afternoon into the night at the very least. This would ensure that the target demographic is more likely to be available and use these facilities

Figure 21: Time of Day Used for Soldier Recreation

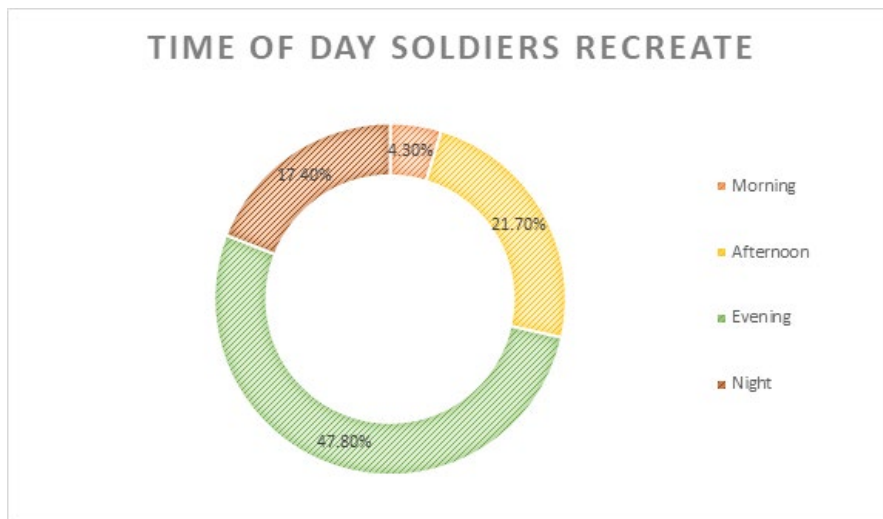
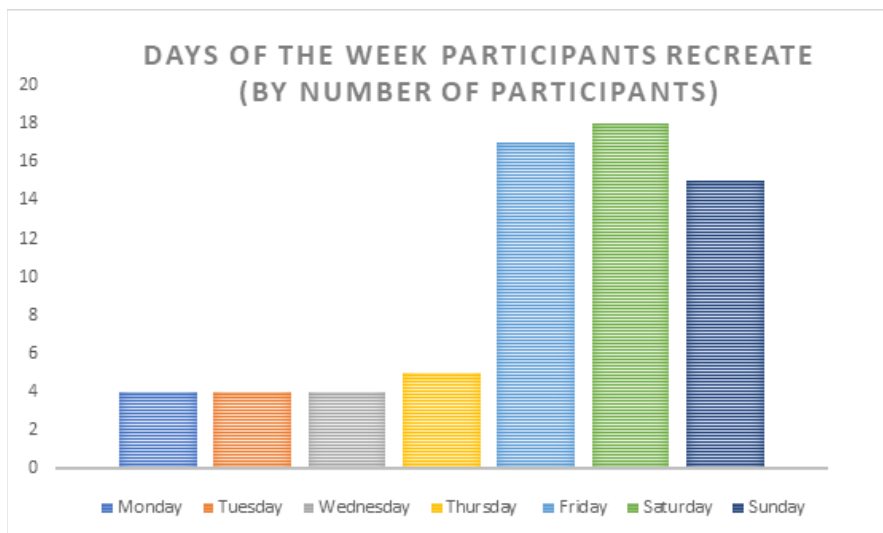


Figure 22: Days of the Week Used to Recreate



Chapter 5- Conclusion

Through the studies of Diener et al., Hull, and Godbey and Mowen, it is found that increased levels of recreation can improve both physical and emotional well-being of community members. This analysis of use of recreational facilities by single soldiers on Fort Riley shows that there is not a lot of time being spent by single soldiers on recreation in general. 70% of participants spend less than 10 hours a week recreating which is less than two hours every day. The studies of Hull et al. find that recreation of two hours or less can improve mood significantly so it is possible that there is enough recreation occurring to make a difference in well-being but for over 35% of participants, less than five hours is being spent weekly on recreation.

Because 90% of participants have more than 10 hours a week of off-time, we can say that this 90% is not held back from participating in recreation because of work or sleep. More studies would have to be done to determine exact reasoning, but because of the lack of knowledge of facilities shown through surveys, as well as the desire to utilize facilities that they hadn't before, there could be steps taken by the post to increase engagement and well-being. Advertisements and promotions of recreational facilities could increase awareness and ensuring that single-soldier targeted facilities were open on weekends in the evening could increase accessibility. Specifically, there are indications made in surveys that gyms on post are not desirable over options off-post. Renovations, new equipment, and options to workout outside were all suggestions to increase use of the on-post gym. Additionally, there are recreational facilities that could be put in place on post or could be a collaboration with the surrounding community that single soldiers would utilize such as go-karts and roller-skating. Interests, availability, and

knowledge of facilities seem to all play a role in the use of recreational facilities on post and their implications to single soldiers' well-being.

Future research should look to investigate the 'why' of some of these findings. Why are soldiers willing to drive off-post to use recreational facilities that are available on post? Why are they unaware of on-post facilities? Is the goal to keep soldiers on post? Where is the line between making recreational facilities accessible and providing transportation to access facilities off-post? What are the benefits of recreating on-post vs. Off-post and vis versa? Perhaps there should be balance, that keeping all activities on the installation is not necessarily the best option but accessibility for soldiers without personal transportation is crucial. I hope to see future research delving into this topic further and that my research here inspires further examination of military communities.

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Appendix A - Survey Questions

1.) What are the recreational facilities on the installation? List as many as possible, whether you use them or not.

2.) Of the facilities listed, which were you aware are available to you?

(all recreational facilities will be listed for selection)

3.) What facilities listed have you ever utilized?

(all recreational facilities on base/post will be listed for selection)

4.) What facilities do you utilize weekly (as season allows)?

(all recreational facilities on base/post will be listed for selection)

What facilities do you utilize monthly (as season allows)?

(all recreational facilities will be listed for selection)

5.) Which of the facilities listed do you utilize with others?

(all recreational facilities will be listed for selection)

6.) Rank facilities in value to your personal life.

7.) Are there facilities listed that you use off post/base instead? What are they?

8.) Are there facilities that are not listed that you must find off post or do without? What are they?

9.) What kind of recreational facilities, currently unavailable, would you utilize if they were available to you on post/base?

Appendix B- Interview Questions

- a.) Why did you not know these were available to you (facilities checked as not utilized in survey); How did you learn about the available facilities that you did know about?
- b.) Why do you use these facilities (facilities checked as utilized in survey); what do you do there?
- c.) Why do you use these facilities so frequently; how do you use them?
- d.) Why do you use these facilities at a lesser frequency; how do you use them?
- e.) Why do you use these facilities with others; how do you use them?
- f.) Considering your rankings, why do the ones at the top of your list have the most value to your personal life; alternatively, the bottom?
- g.) Why do you use some facilities off base that are available to you on base; what is the difference?
- h.) What value do the facilities that you must source off base provide for you?
- i.) Why did you list the facilities that you did? What personal value would these add for you if located on post/base?